



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

January 31, 1995

Sam F. Spiller  
State Supervisor  
US Fish and Wildlife Service  
Arizona Ecological Services State Office  
2321 W. Royal Palm Road, Suite 103  
Phoenix, AZ 85021-4951

Re: USFW consultation number 2-21-95-I-244

Dear Mr. Spiller:

The USEPA, Region IX (EPA) is currently reviewing the permit application for the Magma Copper Company Class III underground injection well, in-situ mining operation. It was suggested by Don Henry, of your office, that any assistance of US Fish and Wildlife in the evaluation of the proposed operations, be requested in writing. Hence, we are requesting the consultation of your office.

The proposed operation will utilize a raffinate pond and a pregnant solution (PLS) pond, each equaling approximately 1/2 acre in size. Additionally, 8 evaporation ponds totaling 110 acres (77 total wet acres) will be utilized. Attached are the estimated characteristics for the impounded solutions. Magma Copper has proposed fencing the ponds to restrict access by terrestrial animals.

The size of the evaporation ponds may preclude netting to restrict access by migratory birds. However, some exclusionary method to restrict bird access may be warranted in the raffinate and PLS ponds. In addition, an ecological risk assessment to evaluate the hazard, and/or a monitoring program to determine actual bird usage of the ponds and any mortality, may be necessary.

We are requesting your consultation on the following matters:

- 1) Have similar sulfate-based (vs. cyanide-based ) operations in Arizona been required to exclude migratory birds from the ponds?
- 2) Are you aware of problems occurring with usage and/or mortality of migratory bird species occurring at other similar (sulfate-type solution) sites?

- 3) Two independent sources have noted that birds are not attracted to the sulphur-based solutions used at these copper mining sites. Have your experiences or separate documentation noted otherwise?

Thank you for sharing your expertise. We are looking forward to resolving this matter as soon as possible. My staff will soon be contacting your office to discuss this matter. If you have any questions or concerns, they can be directed to Judy Bloom at (415) 744-1832.

Sincerely,



Clyde Morris  
Chief, Sourcewater Protection Section  
USEPA, Region IX

cc: Don Henry  
U.S Fish and Wildlife Service

Kirk King  
U.S Fish and Wildlife Service